INL News Release
FOR IMMEDIATE RELEASE
Aug 23, 2010

NEWS MEDIA CONTACTS:
Sandra Chung, 208-526-1919, sandra.chung@inl.gov
Misty Benjamin, 208-526-5940, misty.benjamin@inl.gov

New roofs cool INL buildings to save energy and money

IDAHO FALLS — By the end of summer, seven buildings at the U.S. Department of Energy's Idaho National Laboratory will be reaping the energy- and cost-saving benefits of cool roof technology.

"That's a real big win for us," says Chris Ischay, who manages sustainability and building projects at INL.

Light-colored roofs lower building temperatures by reflecting sunlight back out into space, in much the same way a dashboard reflector helps keep a parked car from becoming an oven. A combination of reflective roofs and high-performance insulation can significantly reduce the temperature and air conditioning needs of buildings and whole communities.

Click to download high-resolution photos, with captions, from INL's flickr page.

At INL, the recently constructed Test Train Assembly Facility already has a cool roof. Part of the roof of the Experimental Breeder Reactor-I National Historic Landmark got a reflective white coating when it was repaired during the first week of August. By the end of September, construction crews will update nearly 60,000 square feet of metal and tar roofing on five other buildings at the INL Site in the desert west of Idaho Falls.

Click to download high-resolution photos, with captions, from INL's flickr page.

"We actually started down this path in October," Ischay says. In October 2009, President Obama issued an executive order calling on federal agencies to "design, construct, maintain and operate high-performance sustainable buildings in sustainable locations." The president also set targets for energy efficiency, waste reduction, greenhouse gas emissions and water conservation.

Department of Energy Secretary Steven Chu has since implemented and clarified the order for DOE offices. In a June 1 memorandum to DOE administration, he mandated the use of cool roofs for all subsequent roof replacements and new construction at DOE sites. The memo defined a minimum solar reflectance and insulation standards for the new roofs.

"By demonstrating the benefits of cool roofs on our facilities, the federal government can lead the nation toward more sustainable building practices, while reducing the federal carbon footprint and saving money for taxpayers," Chu said in a July 19 announcement. The announcement cited the ongoing cool roof projects at INL and at Brookhaven National Laboratory in New York.

A standard black roof can get up to 90 degrees Fahrenheit hotter in full sun, while a white roof heats up by only about 14.5 degrees. Many INL buildings have dark roofs that aid in snow removal and melting in Idaho's chilly winters.

"According to our sustainability program, we will lose a little bit in the winter, but we more than make up for it in the summer on the cool roof," says Randy Damiana, a construction project manager.

Click to download high-resolution photos, with captions , from INL's flickr page.

INL construction managers worked with the Department of Energy's Roof Assessment and Maintenance Program on the five roofs due to be replaced in September. Since 2005, RAMP has managed the installation of more than 2 million square feet of cool and white roofs at other sites that save $500,000 a year in energy costs.

INL is one of the DOE's 10 multiprogram national laboratories. The laboratory performs work in each of DOE's strategic goal areas: energy, national security, science and environment. INL is the nation's leading center for nuclear energy research and development. Day-to-day management and operation of the laboratory is the responsibility of Battelle Energy Alliance.

Subscribe to RSS feeds for INL news and feature stories at www.inl.gov. Follow @INL on Twitter or visit our Facebook page at www.facebook.com/IdahoNationalLaboratory.

—INL-10-025—

News Release Archive